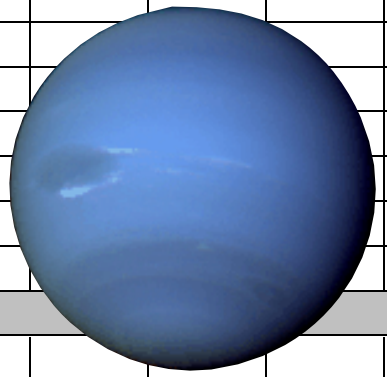
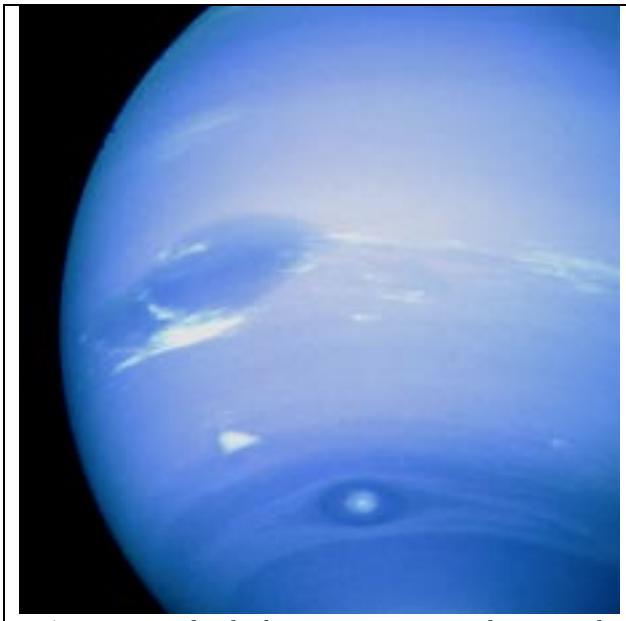
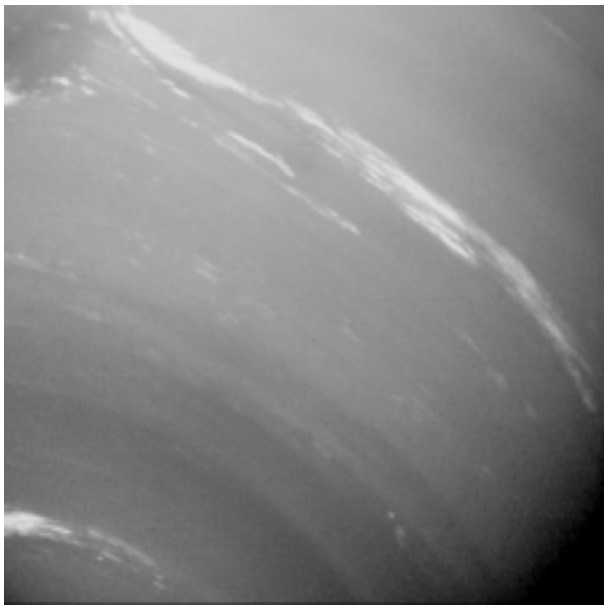
Fast Facts About Neptune

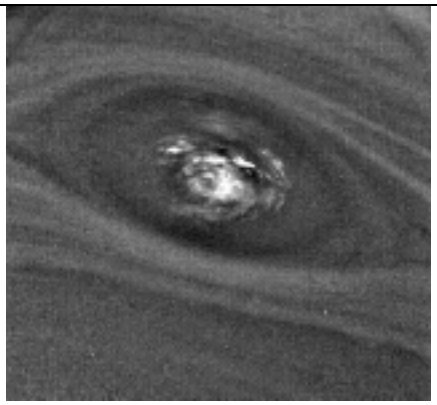
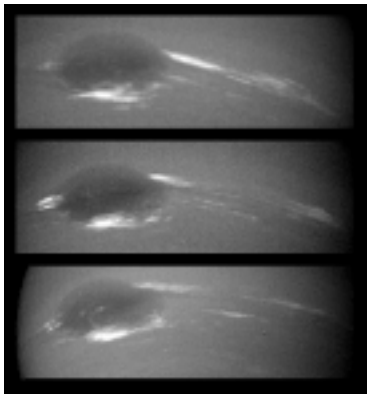
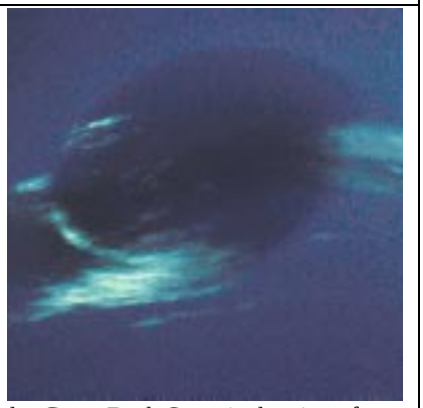
Planetary Parameters		Ratio (Neptune/Earth)
Planet Type	Gas Giant (unlike a solid, rocky planet like Earth)	
Average Distance from Sun (kilometer)	4,498,300,000 compared to Earth's 149,600,000	30.07
Equatorial Diameter (kilometer)	49,532 as compared to Earth's 12,756	3.88
Mass (10^{24} kilogram)	102.43 as compared to Earth's 5.9736	17.15
Volume (10^{10} kilometer^3)	6,254 as compared to Earth's 108.321	57.74
Average Density (gram/centimeter^3)	1.64 as compared to Earth's 5.52	0.30
Surface Gravity (meter/second^2)	11.2 as compared to Earth's 9.78	1.13
Magnetic Field (gauss-Rh^3)	0.142 as compared to Earth's 0.3076	0.46
Orbital Parameters		
Year Length (One Orbit Around the Sun)	164.79 Earth years	
Day Length (One Rotation on its Axis)	16.11 Earth hours	
Inclination of Axis (degrees)	29.56 compared to Earth's 23.45	
Atmosphere and Climate		
Average Surface Temperature (C)	-204 at one bar as compared to Earth's 14.8	
Maximum Temperature (C)		
Minimum Temperature (C)	-215 at one bar as compared to Earth's -33	
Atmospheric Pressure at Surface	Greater than 100 bars (Earth = 1 bar) This pressure exerts a force of 0.45 kg/m^3 at 1 bar compared to Earth's atmosphere which exerts a force of 1.217 kg/m^3 at 1 bar (sea	
Major Atmospheric Gasses	80.0 % Hydrogen, 19.0% Helium, 1.5% Methane	
Summary of Water	There is no liquid water or water vapor	
Planetary Features		
General Overview	Neptune is a gaseous ball with a banded blue atmosphere decorated with white clouds of methane ice. It has several large dark spots like Jupiter's Red Spot.	
Core Composition		
Known Moons/Rings	Triton is 2,700 km in diameter. Also, there are two 300-400 km moons, two 150-200 km moons, and three 50-100 km moons. Neptune's four rings and several diffuse sheets of particles are made of dark materials, are discontinuous, and are thicker in certain sections.	
Visits to Neptune		
1950-99	1989: Voyager 2 (US), flyby, discovers six small moons.	



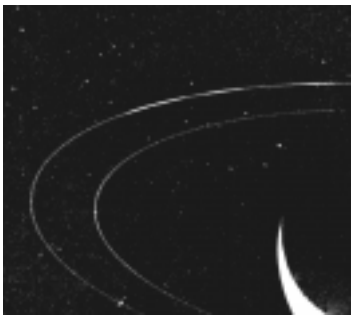
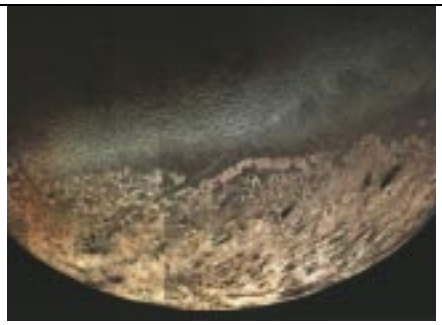
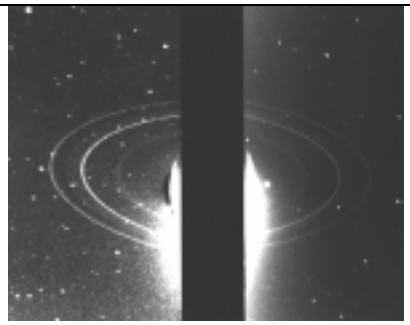
Some Views of the Planet Neptune

1-2) Neptune's clouds show more variety and contrast than Uranus's. Even though it is farther from the sun, Neptune is slightly warmer than Uranus. This warmth, thought to be from the compression of gasses when Neptune formed, creates layers in the atmosphere. This layering creates banding and white frozen methane clouds. The warmth also generates winds up to 2,000 km per hour. Oddly, these winds blow in the opposite direction to Neptune's rotation. Astronomers theorize that Neptune may have "slushy" interiors containing thick layers of water clouds.

3-5) Neptune has several storm systems similar to Jupiter's. The largest, called the Great Dark Spot, is the size of Earth. The storm stays in the same general spot, presumably over a plume of rising warm gas. The disruption and turbulence it causes to the cloud bands encountering it make the storm visible (see the center set of sequenced images above).

6-8) Neptune has eight moons. Triton (center, above), is the largest. Neptune's four rings are not even -- they are thicker in some places and so thin in others that there are openings, making for discontinuous rings. On the right, the brightly reflecting Neptune has been masked so that the camera could image the faint rings.